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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/204,706	12/03/1998	RAVIKUMAR RAMACHANDRAN	98-P-7501-US	5853

7590

03/28/2002

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EXAMINER

OLSEN, ALLAN W

ART UNIT

PAPER NUMBER

1746

20

DATE MAILED: 03/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/204,706

Applicant(s)

RAMACHANDRAN ET AL.

Examiner

Allan W. Olsen

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Withdrawal of Claim Rejections

The 102 rejections of claims 13-15 as being anticipated by each of Chen and Davis are withdrawn because neither Chen nor Davis teach an integrated or cluster-type apparatus that comprises both wet and dry processing chambers.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language;

or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Statement Regarding Method Limitation in Apparatus Claims

The instant claims are directed to an apparatus. These apparatus claims also recite many method and intended use limitations. However, apparatus claims cover what a device is, not what a device does or the manner in which it is used. In claims that are directed to an apparatus, method and intended use are considered only to the extent that they indicate what the claimed device must be capable of performing.

Claims 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,007,981 issued to Kawasaki et al. (hereinafter, Kawasaki).

Kawasaki teaches a multi-station apparatus that integrates both wet and dry processing stations in which the substrate being processed can be heated to a temperature greater than 200° C. The apparatus of Kawasaki includes a remote plasma chamber and a vacuum chamber with having gas supply inlets and a station for conducting wet processes such as rinsing. See figures 2 and 3, column 21 lines 11-50.

Claims 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,135,608 issued to Okutani.

Okutani teaches a multi-chamber apparatus that integrates both wet and dry processing modules in which the substrate being processed can be heated to a temperature greater than 200° C. The apparatus of Okutani includes a plasma chamber and a vacuum chamber having gas supply inlets and a chamber for conducting wet processes such as rinsing. See column 20, lines 28-68.

Claims 13-15 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,007,675 issued to Toshima.

Toshima teaches a multi-chamber apparatus that integrates both wet and dry processing modules in which the substrate being processed can be heated to a temperature greater than 200° C. The apparatus of Toshima includes a remote plasma chamber and a vacuum chamber having gas supply inlets and a chamber for conducting wet processes such as rinsing. See column 21, lines 40 – column 23, line 30.

Claims 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent 5,545,289 issued to Chen et al. (hereinafter, Chen).

Chen teaches an integrated RIE metal etching apparatus (column 12, lines 1-2, 30-36). Chen does not use the word "integrated", nevertheless, the apparatus of Chen contains an etching chamber (not pictured) which is connected to a separate passivating and stripping chamber (column 12, lines 3-8). The apparatus of Chen contains the necessary components to supply a mixture of an etching gas and an acid neutralizing gas into a vacuum chamber (column 13, lines 39-41). Chen demonstrates that the passivating chamber, which is separate from the etching chamber, is capable of forming a water-only plasma (column 17, Table VI, examples 43-45). Plasma generation zone is remote from the substrate supporting structure (see figure 2, column 5, line 66-column 6, line 8). Chen teaches that the apparatus is capable of controlling a substrate's temperature to be, for example, within the range of 150 °C to 400 °C.

Claims 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,816,098 issued to Davis et al. (hereinafter, Davis).

Davis teaches a multi-chamber cluster-type apparatus (see figures 5a and 5b, column 21, lines 3-9, column 23, lines 45-57). The process modules taught by Davis are include vacuum chambers that include: gas supply lines; remote plasma generation means; substrate heating means; and substrate temperature controlling means. Davis shows that the temperature of the stripping chamber is capable of obtaining temperatures of greater than 200° C. The apparatus of Davis contains all the necessary components to meet the apparatus limitations of claims 13-17. See column 60, lines 34-54; column 44, lines 33-47.

Conclusion

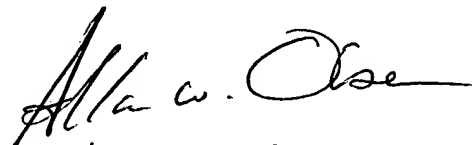
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional art cited on PTO form 892 pertains to integrated wet and dry processing systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is (703) 306-9075. The examiner can normally be reached on Monday through Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (703) 308-4333. The fax phone number for this Group is (703) 305-7719.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Allan Olsen, Ph.D.
March 25, 2002


A.U. 1746